

In the bed without operations, Jackson Curran's Laboratory

list

Dr. Antunio Canale

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PRACTICAL RULES, FOR SAFE GUIDANCE

IN THE
PERFORMANCE OF THE LATERAL OPERATION OF LITHOTOMY, WITH A
TABLE OF CASES OPERATED ON, AND A PRÉCIS OF
RESULTS, AND REMARKS,

BY H. C. CUTCLIFFE, F.R.C.S., H. M. I. ARMY.

THE LATERAL OPERATION OF LITHOTOMY.

I.—THE patient, who should have been directed to retain his urine for some hours previous to the operation, should lie with his back flat on a strong horizontal table, and have nothing under him but a single blanket, and a small pillow for his head. The operator should be seated on a firm stool, of such a height that his shoulders should be a little below the level of the plane of the operating table. The patient's thighs should be flexed, his hands secured to his feet in the usual manner, and his body brought to the end of the table where each thigh should be held by an assistant.

Chloroform should be administered till complete anæsthesia is produced.

II.—A Lithotomy curved staff, having a deep groove to its distant end where the groove should terminate abruptly, and of a size as large as the urethra will conveniently admit, having

been passed into the bladder, and the striking of the stone by the sound having been felt and heard, the operator entrusts the staff to be firmly held by an assistant standing behind him who secures the left thigh. The holder of the staff should prevent the escape of urine from the bladder by pressing the urethra with his left hand against the instrument.

III.—The operator now takes his seat facing the perineum which should be well exposed by keeping the thighs apart, and be held steadily in one plane by the assistants. The tuber Isehii on ^{the} ~~either~~ side is first to be felt for, and the distance between the two processes, and between each process and the anus is to be noted. Then the rami of the Isehium and Pubis are to be very distinctly made out by firm pressure of the fingers carried upwards from the tubers of the Isehii till they meet below the symphysis pubis. A clear idea of the osseous boundaries of the anterior half of the perineal space will thus have been formed.

The operator takes the staff in his right hand, and with its handle and straight part held perpendicularly, raises it till the curve is hooked, and rests firmly under the symphysis pubis. In this position the assistant is warned steadily to hold the staff.

Again the operator passes his fingers from below upwards along the under margins (as the pelvis is now placed) of the rami of the Isehium and pubis till, immediately below the symphysis pubis, he feels where the staff occupies an interval between the lower (in this position) margins of the rami of the pubis just where they are approximating to one another to form the symphysis pubis. Between the margins

of these bones the staff can be distinctly felt ; but deeper than this, in its way onwards to the bladder, it cannot be felt. Over this spot where the sound can last be felt beneath the symphysis pubis, the operator presses, in a direction from below upwards, the apex of his left fore-finger. with its palmar surface turned outwards to the left.

This spot is the *guide* for the first incision, and it is at this spot that, by successive incisions, the membranous portion of the urethra will be eventually reached. From this spot, the first incisions should extend downwards and outwards passing the junction of the middle and outer third of the space between the anus and left tuber Ischii to about the level of the posterior margins of the anus.

Now having clearly determined the limits of the first incision, let the operator imagine a line carried from the central point of the length of this first incision upwards and backwards through the umbilicus of the patient. This imaginary line is the *guiding line* which indicates the direction in which the finger and every instrument should be passed, in all the subsequent efforts to reach the bladder. By carefully bearing in mind this *directing line* during the subsequent stages of the operation, the rectum will be avoided ; the base of the bladder will be free from danger of penetration by the point of the scalpel, & the prostate will be correctly incised ; the finger will hit the incision in the prostate, and enter it without the risk of pushing back the bladder before it, and of separating the cellular tissue in the recto-vesical space, and of forming there a cavity which, if I think rightly, has, before now, been mistaken for the interior of the bladder itself ; the forceps or extracting instrument will be passed with certainty and without impediment, and the stone will be surely reached.

IV. Let the operator take in his right hand the Lithotomy scalpel, *i.e.*, a scalpel with a moderately broad blade, a sharp point and a long rough handle, and holding it as a pen, keeping the while the imaginary or *directing line* in his mind, let him sink the point of the knife boldly by the nail of the left fore-finger which is pressing on the *guiding spot* of the first incision. Let the knife be carried downwards and outwards past the junction of the outer and middle third of the space between the left tuber Ischii and verge of the anus on the left side till it is opposite to, or a little behind, the posterior verge of the anus, where it should terminate. This incision requires some boldness and firmness, in the use of the knife, and divides the skin and superficial fasciæ and fat, with their vessels and nerves.

V. The left fore-finger is passed within the incision, in the direction of the *guiding line*, and the staff is again felt for where it can be ~~least~~^{best} perceived in escaping beneath and behind the symphysis. Over this spot the left fore-finger with its palmar surface turned outwards to the left, presses firmly, and the knife held parallel to the direction of the *guiding line*, is sunk by the finger's nail, and is carried downwards and outwards so as to divide the next deeper layer of structures in the direction of the first incision. The parts now divided are some deeper layers of areolar and fatty tissue, the base of the triangular ligament, the transversus perinei muscle, some part of the levator ani muscle, probably, and some of the superficial perineal vessels and nerves.

If this incision be made much shorter than the first, difficulty will be found in extracting a large stone; for it is the structures which are divided in this incision, which form the chief obstacle to the easy extraction of a large calculus.

from the bladder by this operation. When difficulty in extracting a large stone through the soft parts has arisen, the opposing parts have appeared to me to be the base of the triangular ligament, and the deep layer of perineal fascia which dips down to join it. A free use of the knife in dividing these structures ensures an easy exit for the stone.

VI.—The left fore-finger is again, in the same direction as before, passed into the wound, and now, passing between the *erector penis* and the *accelerator urinæ* muscles, it searches for the staff where it can be last or most deeply felt under the pubic arch. The groove of the staff can now be here detected through the *constrictor urethræ* muscle in the membranous portion of the urethra. The nail of the finger is passed into the groove, and the point of the knife is made to enter it, and to rest firmly in it. The blade of the knife is then turned or lateralized so as to form an angle of 45° with the central raphe of the perineum. Keeping the knife steadily, as described, against the staff, and in a direction parallel with the *guiding line*, the operator now takes the handle of the staff in his left hand, and turns it down towards him so that its curve revolves under the pubic arch, and its point ascends further and higher into the bladder. By this movement the knife will have been carried, resting on the staff, forwards through the prostate gland into the bladder. The extent of the incision or notch thus made in the prostate gland depends on the angle which the knife made with the staff when resting in its groove. The guide to this angle is the *guiding line*; and if the knife be held parallel to, or in continuation of, this imaginary line, the prostate will be sufficiently incised to admit the point of the finger to pass through it by the side of the staff.

That the knife has penetrated through the prostate, and has entered the bladder is known by the escape of urine which now takes place through the wound.

VII. The knife is withdrawn along the groove of the staff, and if the deep structures have been properly divided in the second incision, no further use of it is required.

Still holding the staff, the operator now drops his knife, and passes his right fore-finger, in the direction of the *guiding line* up to and along the staff, till he feels the resistance which the prostate usually offers to its admission to the bladder. By a little pressure and turning of the finger, this resistance is easily overcome, and the interior of the bladder reached, and the stone felt. If the calculus be a large one, some dilatation of the prostate wound, or even laceration of the prostatic structure, is required. The necessary enlargement is very easily effected by pressure of the finger. Satisfied of having felt the stone with his fore-finger, and assured of its size and position, the operator now withdraws the staff from the urethra, and proceeds—

VIII. To pass the forceps or scoop, by the same *guiding line* as before, into the bladder from whence, having caught the stone in the axis most advantageous to its easy exit, he now extracts it.

REMARKS, AND PRÉCIS OF CASES.

To know a definite and tangible spot where the first and subsequent incisions are to be commenced, and to have a definite guide to direct him in the subsequent stages of the Lateral Operation of Lithotomy, is a matter affording an undoubted assurance, and is of the highest utility, to a

Surgeon, who has not attained to that amount of manual dexterity, or "knack," which our great Lithotomists have so ably exhibited in their practice, though so feebly portrayed in their writings.

I have now performed the Lateral Operation of Lithotomy 110 times, and, with the exception of my first case, I have always acted strictly by the Rules above described, and which I believe would lead an ordinary anatomist, with safety to the bladder, even though his eyes were blind-folded.

It may appear, at first sight, that to cut down on where the staff disappears below and behind the symphysis pubis would be to endanger the bulb of the urethra and its artery. But if my directions be strictly followed and the *guiding line* be carefully remembered, it will be found that, by the time the operator has got down to his staff, he is behind the bulb and in the membranous portion of the urethra.

I am convinced that to bear in mind this *guiding line*, and to hold all instruments in its direction, is a matter of the utmost importance; and I believe that one great error into which Surgeons when first commencing to operate for stone are led, results from the plates in the Works on operative surgery in which, usually, the patient is represented to have his back raised, and the operator to hold his knife horizontally, or nearly so. The disastrous result of such a position of the patient, and such a direction of the knife, I have witnessed; and, though the operator seemed vexed, I was not at all astonished to find that he had cut into the rectum.

The cases which I have operated on have not been selected as specially favourable for the operation of Lithotomy. Nor have I, as yet, met with a case which I have not consented to

operate on, though some have been in an almost hopeless condition at the time of the operation. In some cases of stone in Europeans, guided by ordinary surgical reasoning, I have performed the operation of Lithotrity. But to this operation on natives, there are objections which do not obtain in the case of Europeans. Physically, ^{considered} the question of selection of Lithotomy or Lithotrity is probably almost the same in ~~both~~ ^{both} races; but, morally, ^{considered} the difference seems to be very great, and the protraction of the treatment in the procedure of Lithotrity would, as a rule, tell more unfavourably against the native, influenced so deeply as he is by superstition, fear, suspicion, intolerance of discomfort, disappointment of unreasonable expectations, &c., than against the less timid and more confident European. On the whole, we may say, that there are greater disadvantages resulting from the operation of Lithotrity on natives, than on Europeans. Still, I am of opinion that the mortality from operation, on the natives of India, for stone, might be reduced by a careful selection and judicious discrimination of cases for the operation of Lithotomy ~~and~~ ^{or of} Lithotrity. We should hear, probably more of Lithotrity in India, were it not that very few Surgeons possess the instruments necessary for the performance of the operation.

I have always operated on my cases, immediately or as soon as possible, after their admission into Hospital. No preparatory treatment whatever, excepting, perhaps, a dose of castor-oil, or a simple water enema to empty the rectum, has been employed. To prevent delay and the fear which results from it, I have often cut a man for stone on my first seeing him at the Hospital without waiting even to give an enema, inasmuch as I have found that, if the sound be passed into the bladder so as to produce some irritation in that viscus

before the effects of chloroform have perfectly developed themselves in complete anæsthesia, a reflex nervous action induces powerful contraction of the muscles which aid in forcible micturation and defæcation, and the result is a complete emptying and, usually, a prolapse of the rectum which, however, as anæsthesia is completed, is readily returned by pressure with a cold sponge. The passage of instruments, further than necessary to ascertain that a stone existed in the bladder, has been avoided. My experience leads me to believe that the ordinary sound often misguides one as to the exact size of a calculus in the bladder; and, on more than one occasion when I have believed that a very large stone was present, I have found only a moderate sized one either peculiarly situated, or extraordinarily shaped, so that either its whole or part was so located at the neck of the bladder that the sound, in whatever direction moved, still yielded to the touch, and ear, a sense of ~~the~~ *grating* on the stone, and hence gave to the mind an erroneous judgment of the dimensions of the surface of the calculus. This may be understood better by a reference to the collection of calculi which I have had the honor of contributing to the Museum of the Royal College of Surgeons of London. Amongst the stones which I have removed from the human bladder, some of very curious shapes with beak-like projections will be found, and on examining them, no one will doubt that difficulty must have existed, in some cases, in determining, by the ordinary sound, alone, the size of the calculus.

As before described, the prostate has always been sparingly incised by the knife, and the small incision enlarged by dilatation or laceration of the prostatic structure by the finger after it had obtained a correct knowledge of the size of the stone by tactile examination in the bladder.

After the operation, no catheter or other instrument has been passed or kept in the perineal wound. The urine has been allowed to freely flow whence it could. The diet has been a nutritious and liberal one from the first day of the operation, and every means has been directed to keep up the natural reparative powers of the patient's system.

According to Mr. Coulson, as quoted by Mr. Erichsen, the average of deaths from the lateral operation of Lithotomy in England is 1 in 6·93 cases : whilst in France it is 1 in 5·7 ; and, for Europe, generally, 1 in 5·14.

Dr. Fayrer, in his work on "*Clinical Surgery in India*," states that, from statistics taken from official returns for the second half of the year 1863, from 180 Hospitals or Dispensaries in the Bengal Presidency, in Bengal Proper, 68 cases of Lithotomy were operated on with eight deaths ; or, one death in 8·5 cases ; and, in the North-Western Provinces and the Punjab, 555 cases of Lithotomy were operated on with 57 deaths, or one death in 9·9 cases.

In the statistics for Asia, the European Surgeon should make, I think, some allowance for the selection of favorable cases operated on by the native Sub-Assistant Surgeons and native Doctors of India, as well as allow a certain liberal margin for probable inaccuracies of any returns which are not made by the European Medical Officers themselves.

Of the 111 cases of Lithotomy in the accompanying Table, 110 were operated on by the lateral operation, and 109 of these strictly in accordance with the rules hereinbefore described. Of the 111 cases, 5 died, or one in 22·2. These were the 18th, 27th, 36th, 76th, and 93rd cases. But of these five fatal cases, the death of one, No. 37, was caused by poisoning

by opium. The operation in this case was, in every respect, successful, and the boy was convalescent. The cause of death in another case, No. 93, was diarrhœa which came on immediately after the operation, and was unconnected with blood-poisoning or any morbid condition resulting from the wound. It was purely an accidental complication which unfortunately I was not present to check, and which the native doctor failed to arrest. There remain, therefore, but three cases of failure resulting from the operation out of 110 cases operated on, or, one in 36·6; and out of 110 patients of all ages operated on, only one below the age of 35 years, died from this operation.

These figures sufficiently prove that the method by which the operation was performed is trustworthy; but the merits of the operative proceeding appear more conspicuous when the fatal cases themselves are analysed. In case No. 18, a boy of six years of age, secondary hæmorrhage, on the 10th day after the operation, caused death. The bleeding came on, and the boy died, during my absence. I subsequently ascertained from the native doctor that nothing whatever had been attempted to arrest the hæmorrhage, which was not violent, but was long continued. It is possible that death, in this case, might have been prevented, had proper treatment been adopted to arrest the bleeding. In the next case, No. 36, the patient, aged 35, had suffered from symptoms of stone for four years. His bladder and kidneys were extensively diseased, and he sank from exhaustion. This patient was physiologically an old, worn out man, and I only consented to operate on him as a means of giving him a last hope in life. In the third case, No. 76, the patient, aged 60, had a large prostate. The stone was easily extracted, and nothing untoward resulted from the operation itself, and he rallied from the effects of chloroform, and seemed to be doing

well when I and the native Doctor left him. On the native Doctor's return to the man, he was dead. It is possible that, had I remained longer by this man, and been able to give him stimulants when his heart's action began to fail, that his death might have been prevented. The two last cases, I think it must be admitted, prove nothing against any particular method of operation adopted. And if we except these two last as being cases likely to have ended in death, under any method of operation, we find but one case out of the whole 111 which can be charged to any fault in the manner of the operation performed. And ^{that} this case of secondary hæmorrhage on the 10th day, I am not at all certain, might not have been saved had proper surgical measures been adopted to stop the bleeding. In looking at the Table, it seems that the average number of days the patients remained in Hospital was 20·81.

The fewest number of days in which any one case was discharged cured was 10.

The average number of days after the operation before urine began to be passed by the urethra was 8·60.

The average number of days before the urine ceased to pass by wound was 14·58.

The earliest date on which urine began to pass by the urethra was two days after ^{the} operation.

The earliest date at which the urine ceased to pass by the wound, was seven days after ^{the} operation.

In considering the ages of the patients operated on, it should be known that the native of India, who has from any cause suffered from ill health, is, at the age of 40, physiologically an older man than the average of Englishmen at, probably, 60.

The calculi taken from the cases now under report together with others removed by different methods of operation, are in the Museum of the Royal College of Surgeons of England.

In my table of cases, under the head "apparent character of stone," the supposition of the nature of the stone has been made roughly, and simply from the outer appearance presented. I have made no chemical analysis of these calculi.

Excepting the fatal cases now recorded, no death from stone in the bladder or from any endeavour which I have made to ^{remove a stone from} ~~relieve~~ it, has ever occurred in my practice.

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H. M'S. I. ARMY.

MUSSOURIE,
N. W. PROVINCES, BENGAL. }
19th December, 1866.

ABSTRACT from the Records of cases of Stone operated on by H. C. Cutcliffe, F. R. C. S., Assistant Surgeon, H. M.'s Indian Army.

No.	Names.	Ages.	Caste.	Occupation.	Duration of symp- toms.	District.	DATES WHEN					Manner of operation.	CALCULUS.					OBSERVATIONS.	
							Admitted.	Urine first passed by Urethra.	Urine ceased to pass by wound.	Discharged cured.	Died.		Number.	WEIGHT.					Apparent character.
														Ounces.	Drachms.	Scruples.	Grains.		
1	Raheem Bux	30	Mahomedan..	Weaver	1 year	Mozuffernugur	17 Dec. 1859	23 Dec. 1859	1 Jan. 1860	5 Jan. 1860		Lateral Operation— Lithotomy.	1	0	1	2	7	Ovoid. White phosphates ...	CASE 4. This boy was greatly emaciated, and had suffered most intensely from pain. CASE 8. Arch of pubis exceedingly narrow; perineum shallow; and the man greatly reduced, and so feeble as to be unable, by himself, to stand. The stone was 1. seized by the apex with forceps, but could not be brought through the pubic arch. II. Turned and brought down, base foremost, but equally locked in the bones. III. The scoop was passed over apex, the fingers making a lever for it, the left index finger supporting stone below: finally, by a half turn under the pubis, the stone, like a child's head, was delivered. There was much difficulty in getting the neck of the bladder back over the stone. <i>total weight including detritus over 80 grs</i> CASE 9. Behind the prostate the bladder was deeply pouched, so that the stone could not readily be seized with the forceps. With scoop and forefinger of left hand extraction was easy and quick. CASE 10. This stone was lying apparently lodged, and sacculated immediately behind the prostate, at the base of bladder. By injecting, so as to distend bladder, the stone could scarcely be detected; while, when the viscus was empty, the stone was felt under the convex portion of the sound, and gave one the idea of its being a large one. Its apex was probably modelled to the opening of the urethra. CASE 12. For 10 years suffered from stone. Has been cut by Lateral operation already four different times. There is a deep cicatrix on left side of perineum, where he was cut. 2nd operation at an interval of one and a half year from first. 3rd operation after an interval of two years from second. 4th operation after an interval of two years from third; and 5th operation after an interval of two years from fourth. CASE 18. Had some symptoms of irritation about bladder, which yielded to treatment. No bad symptoms up to the night of the 11th June, when suddenly he began to screech. Haemorrhage occurred, and he died very quickly. The wound had not granulated, but looked void of power of recovery, <i>hair</i> . CASE 25. A remarkably narrow pelvis and high pyriform bladder, at the top of which, nearly level with the umbilicus, was the stone.
2	Fukheer	40	Hindoo	Beggar	2 years	Meerut	1 Jan. 1860	10 Jan. 1860	17 Jan. 1860	20 Jan. 1860	.....	Ditto	2	0	8	...	19	Lithic acid ...	
3	Mahatab	10	Mahomedan...	Cultivator	18 mos.	Ditto	17 Jan. 1860	25 Jan. 1860	6 Feby. 1860	6 Feby. 1860	.....	Ditto	1	0	1	2	5	Ovoid. White phosphates ...	
4	Lall Dey	11	Hindoo	Shoemaker	16 mos.	Ditto	10 Feby. 1860	21 Feby. 1860	24 Feby. 1860	10 March 1860	.....	Ditto	1	0	2	1	12	Lithic acid ...	
5	Shear Singh	5	Ditto	Boy	14 mos.	Mozuffernugur	11 March 1860	19 March 1860	23 March 1860	28 March 1860	.....	Ditto	1	0	0	0	18	Ditto ...	
6	Pultoo	6	Ditto	Shoemaker	17 mos.	Meerut	17 March 1860	25 March 1860	29 March 1860	29 March 1860	.....	Ditto	1	0	0	1	12	Ditto ...	
7	Pudum	4	Ditto	Ditto	1 year	Ditto	26 March 1860	16 April 1860	12 April 1860	15 April 1860	.....	Ditto	1	0	0	1	12	Roundish white phosphatic stone ...	
8	Dilour Khan	30	Mahomedan..	Tailor	4 years	Ditto	11 April 1860	7 May 1860	5 May 1860	4 May 1860	.....	Ditto	1	*6	7	0	0	Ditto ...	
9	Dullo	30	Lodha	Labourer	6 mos.	Ditto	26 April 1860	2 May 1860	4 May 1860	9 May 1860	.....	Ditto	1	0	0	2	5	Soft phosphates ...	
10	Goolamulla Khan...	...	Mahomedan..	Ditto	.....	Ditto	7 May 1860	12 May 1860	19 May 1860	20 May 1860	.....	Ditto	1	0	0	2	7	Lithic acid ...	
11	Surdath	60	Ditto	Ditto	3 years	Ditto	12 May 1860	20 May 1860	23 May 1860	25 May 1860	.....	Ditto	1	0	5	1	0	A white, hard, phosphatic stone...	
12	Taikussun	60	Chumar	Shoemaker	10 years	Ditto	14 May 1860	17 May 1860	27 May 1860	28 May 1860	.....	~~Median Perineal Operation~~	1	0	2	0	7	Ditto...	
13	Sukhtoo	19	Hindoo	Khoomar	5 years	Ditto	18 May 1860	30 May 1860	31 May 1860	31 May 1860	.....	Lateral Operation— Lithotomy.	1	1	0	0	0	Roundish stone. White phosphates. ...	
14	Duleep	6	Ditto	Boy	4 years	Ditto	19 May 1860	27 May 1860	29 May 1860	30 May 1860	.....	Ditto	1	0	0	1	8	Uric acid ...	
15	Fukheera	14	Ditto	Ditto	3 years	Ditto	26 May 1860	7 June 1860	16 June 1860	20 June 1860	.....	Ditto	1	1	1	0	3	Lithic acid ...	
16	Ooda	18	Ditto	Khoomar	3 years	Ditto	30 May 1860	18 June 1860	24 June 1860	25 June 1860	.....	Ditto	2	0	4	0	0	.....	
17	Kooree	18	Ditto	Labourer	1½ year	Ditto	2 June 1860	10 June 1860	18 June 1860	23 June 1860	.....	Ditto	1	0	7	0	0	Ovoid. White phosphates ...	
18	Abdool Luteef	6	Mahomedan	Boy	1½ year	Bijnour	2 June 1860	.....	.....	.....	12 June 1860.	Ditto	1	0	2	0	0	Lithic acid...	
19	Nutto	6	Hindoo	Ditto	1 year	Putowlee	13 July 1860	31 July 1860	1 Aug. 1860	5 Aug. 1860	.....	Ditto	1	0	1	1	5	.....	
20	Manee	18	Ditto	Shoemaker	11 years	Abdulpoor	23 July 1860	3 Aug. 1860	7 Aug. 1860	9 Aug. 1860	.....	Ditto	1	0	9	0	15	.....	
21	Jaipaul	3	Ditto	Boy	1 year	Meerut	28 July 1860	9 Aug. 1860	14 Aug. 1860	19 Aug. 1860	.....	Ditto	1	...	...	...	...	Ovoid. Uric acid ...	
22	Shauarrah	3	Ditto	Kahar	1 year	Jounpore	31 July 1860	13 Aug. 1860	15 Aug. 1860	21 Aug. 1860	.....	Ditto	1	0	2	1	1	Lithic acid ...	
23	Murad	11	Ditto	Boy	9 mos.	Meerut	2 Aug. 1860	10 Aug. 1860	14 Aug. 1860	21 Aug. 1860	.....	Ditto	2	0	0	1	13	Ditto ...	
24	Hossain Bux	30	Mahomedan	Tailor	1 year	Ditto	6 Aug. 1860	14 Aug. 1860	16 Aug. 1860	12 Aug. 1860	.....	Ditto	1	0	0	0	14	Ditto ...	
25	Bulaka	11	Hindoo	Shoemaker	5 mos.	Ditto	20 Aug. 1860	.....	.....	13 Sept. 1860	.....	Ditto	1	0	6	1	2	Ditto ...	

* Over one ounce of fragments was also collected.

ABSTRACT from the Records of cases of Stone operated on by H. C. Cutcliffe, F. R. C. S., Assistant Surgeon, H. M.'s Indian Army.—(Continued.)

No.	Names.	Ages.	Casts.	Occupation.	Duration of symptoms.	District.	DATES WHEN.					Manner of operation.	CALCULUS.					OBSERVATIONS.				
							Admitted.	Urine first passed by Urethra.	Urino ceased to pass by wound	Discharged cured.	Died.		Number.	WEIGHT.					Apparent character.			
														Ounces.	Drachms.	Scruples.	Grains.					
26	Chadee	...	47	Hindoo	...	Shoemaker	1 year	Meerut	...	23 Aug. 1860			10 Sept. 1860		Lateral Operation—Lithotomy.	1	0	1	2	10	Lithic acid	CASE 27. On the 19th November, this boy was almost well of his wound in the perineum, when Diarrhoea of a slight nature came on, and the native doctor gave him m. vi. Tinct. Opii three times, when he died of poisoning from opium. The wound had almost entirely healed, and the lad had no bad symptoms.
27	Thanua	...	10	Ditto	...	Sweeper	1 year	Ditto	...	12 Nov. 1860	.....	.....	19 Nov. 1860.	.....	Ditto	1	0	1	2	1	A phosphatic stone	
28	Thanna	...	15	Ditto	...	Brahmin	2 years	Gunaispoor	...	17 Nov. 1860	21 Nov. 1860	2 Dec. 1860	14 Dec. 1860	.....	Ditto	...	...	...	...	...	...	
29	Shana	...	25	Ditto	...	Labourer	1½ year	Meerut	...	18 Nov. 1860	24 Nov. 1860	28 Nov. 1860	18 Jan. 1861		Ditto	1	0	3	9	9	Lithic acid	Case 36. A very large ovoid-shaped stone. A hopeless case, with extensive disease of the bladder and kidneys. Died from exhaustion.
30	Zamodeen	...	12	Mahomedan	...	Shaik	8 mos.	Sindhana	...	21 Dec. 1860	.....	.....	18 Jan. 1861	.....	Ditto	...	...	...	...	...	...	
31	Muglis	...	10	Ditto	...	Ditto	1 year	Meerut	...	22 Dec. 1860	27 Dec. 1860	8 Jan. 1861	14 Jan. 1861	.....	Ditto	1	...	0	2	...	A phosphatic stone... ..	
32	Budloo	...	50	Hindoo	...	Chumar	2 years	Ditto	...	7 Jan. 1861	20 Jan. 1861	23 Jan. 1861	31 Jan. 1861		Ditto	1	...	...	...	...	...	Case 39. A very large ovoid-shaped stone. A hopeless case, with extensive disease of the bladder and kidneys. Died from exhaustion.
33	Mockun	...	8	Ditto	...	Grocer's son	3 years	Ditto	...	23 Jan. 1861	9 Feby 1861	29 Feby. 1861	17 Mar. 1861	.....	Ditto	1	0	0	1	10	White phosphatic stone ...	
34	Dullah	...	16	Ditto	...	Chumar	1 year	Ditto	...	16 Mar. 1861	29 Mar. 1861	5 April 1861	11 April 1861	.....	Ditto	1	0	1	1	0	Ditto... ..	
35	Ghaseeta	...	8	Ditto	...	Ditto	3 years	Ditto	...	20 Mar. 1861	20 April 1861	25 April 1861	29 April 1861		Ditto	1	0	3	2	0	Ditto... ..	Case 39. A very large ovoid-shaped stone. A hopeless case, with extensive disease of the bladder and kidneys. Died from exhaustion.
36	Khoshan	...	35	Ditto	...	Ditto	4 years	Ditto	...	20 Mar. 1861	.....	.....	24 Mar. 1861	.....	Ditto	1	4	2	1	10	.....	
37	Mam Raj	...	5	Ditto	...	Labourer	1 year	Ditto	...	1 May 1861	5 May 1861	19 May 1861	23 May 1861	.....	Ditto	1	0	1	1	10	White phosphatic stone ...	
38	Hooshang	...	7	Ditto	...	Gardener	1½ year	Ditto	...	1 May 1861	18 May 1861	4 June 1861	8 June 1861		Ditto	1	0	8	1	8	Ditto... ..	Case 39. A very large ovoid-shaped stone. A hopeless case, with extensive disease of the bladder and kidneys. Died from exhaustion.
39	Shibbak	...	11	Ditto	...	Ditto	2 years	Ditto	...	8 May 1861	17 May 1861	22 May 1861	26 May 1861	.....	Ditto	1	0	1	1	0	Lithic acid	
40	Sars Ram	...	4	Ditto	...	Jat	1 year	Ditto	...	12 May 1861	21 May 1861	27 May 1861	31 May 1861	.....	Ditto	1	0	1	1	12	.....	
41	Khoshan	...	15	Ditto	...	Labourer	3 years	Ditto	...	16 May 1861	3 June 1861	7 June 1861	16 June 1861		Ditto	1	2	3	1	0	Soft phosphatic stone ...	Case 39. A very large ovoid-shaped stone. A hopeless case, with extensive disease of the bladder and kidneys. Died from exhaustion.
42	Beharee Lall	...	30	Ditto	...	Grocer	4 years	Ditto	...	19 May 1861	4 June 1861	7 June 1861	11 June 1861	.....	Ditto	1	1	1	1	15	Lithic acid	
43	Chungoo	...	5	Ditto	...	Brahmin	2 years	Ditto	...	20 May 1861	8 June 1861	7 June 1861	7 June 1861	.....	Ditto	1	0	1	2	10	.....	
44	Khashrie	...	5	Ditto	...	Jat	1 year	Ditto	...	24 May 1861	2 June 1861	5 June 1861	8 June 1861		Ditto	1	0	0	0	8	A white phosphatic stone ...	Case 39. A very large ovoid-shaped stone. A hopeless case, with extensive disease of the bladder and kidneys. Died from exhaustion.
45	Nawill	...	15	Ditto	...	Ditto	3 years	Ditto	...	24 May 1861	4 June 1861	10 June 1861	16 June 1861	.....	Ditto	1	0	3	1	0	Lithic acid	
46	Kishun Lall	...	26	Ditto	...	Brahmin	8 years	Ditto	...	1 June 1861	8 June 1861	15 June 1861	21 June 1861	.....	Ditto	...	0	2	2	16	One soft phosphatic stone.	
47	Luchma	...	7	Ditto	...	Banyan	2 years	Ditto	...	10 June 1861	20 June 1861	27 June 1861	30 June 1861		Ditto	1	0	7	0	0	Ditto... ..	Case 39. A very large ovoid-shaped stone. A hopeless case, with extensive disease of the bladder and kidneys. Died from exhaustion.
48	Sawutt	...	55	Ditto	...	Ditto	2 years	Ditto	...	14 June 1861	19 June 1861	30 June 1861	5 July 1861	.....	Ditto	1	0	2	2	0	Ditto... ..	
49	Beharee Lall	...	11	Ditto	...	Cultivator	2 years	Ditto	...	21 June 1861	27 June 1861	5 July 1861	13 July 1861	.....	Ditto	1	0	8	2	0	A brown mulberry stone ...	
50	Kishoull	...	17	Ditto	...	Brahmin	3 years	Ditto	...	21 June 1861	27 June 1861	8 July 1861	13 July 1861		Ditto	1	0	6	0	10		Case 39. A very large ovoid-shaped stone. A hopeless case, with extensive disease of the bladder and kidneys. Died from exhaustion.
51	Gouree Dutt	...	65	Ditto	...	Ditto	3 years	Ditto	...	24 June 1861	29 June 1861	8 July 1861	16 July 1861	.....	Ditto	1	0	6	0	10	.....	
52	Huttee	...	50	Ditto	...	Gardener	2 years	Ditto	...	19 July 1861	29 July 1861	30 July 1861	5 Aug. 1861	.....	Ditto	1	1	1	0	0	A mulberry stone	

ABSTRACT from the Records of cases of Stone operated on by H. C. Cutcliffe, F. R. C. S., Assistant Surgeon, H. M.'s Indian Army.—(Continued.)

No.	Names.	Ages.	Caste.	Occupation	Duration of symptoms.	District.	DATES WHEN					Manner of operation.	CALCULUS.					OBSERVATIONS.						
							Admitted.	Urine first passed by Urethra.	Urine ceased to pass by wound.	Discharged cured.	Died.		Number.	WEIGHT					Apparent character.					
														Ounces.	Drachms.	Scruples.	Grains.							
53	Nawill	...	4	Hindoo	...	Boy	...	1½ year	Meerut	...	9 July 1861	25 July 1861	31 July 1861	2 Aug. 1861	.....	Lateral Operation—Lithotomy.	1	0	0	2	5	A mulberry stone	...	...
54	Shibba	...	6	Ditto	...	Ditto	...	1 year	Ditto	...	23 July 1861	2 Aug. 1861	9 Aug. 1861	14 Aug. 1861	.....	Ditto	1	0	1	1	10	A white phosphatic stone	...	...
55	Jumma	...	2	Ditto	...	Child	...	9 mos.	Ditto	...	25 July 1861	2 Aug. 1861	6 Aug. 1861	8 Aug. 1861	.....	Ditto	1	0	0	1	0	A mulberry stone	...	...
56	Totah	...	16	Ditto	...	Brahmin	...	4 years	Ditto Hattrass.	...	21 Aug. 1861	2 Sept. 1861	5 Sept. 1861	10 Sept. 1861	.....	Ditto	1	0	2	2	0	A white phosphatic stone	...	...
57	Gheesun	...	8	Ditto	...	Rajpoot	...	1 year	Ditto	...	23 Aug. 1861	31 Aug. 1861	6 Sept. 1861	10 Sept. 1861	.....	Ditto	1	0	0	2	10	Ditto	...	...
58	Ullum	...	9	Shaik	...	Boy	...	2 years	Ditto	...	15 Sept. 1861	29 Sept. 1861	10 Oct. 1861	8 Oct. 1861	.....	Ditto	1	0	3	0	0	Ditto	...	...
59	Churantee	...	11	Ditto	...	Ditto	...	4 years	Ditto	...	17 Sept. 1861	23 Sept. 1861	28 Oct. 1861	2 Nov. 1861	.....	Ditto	1	1	2	1	0	A large mulberry stone	...	...
60	Masonta	...	24	Ditto	...	Labourer	...	4 years	Ditto	...	23 Sept. 1861	3 Oct. 1861	5 Oct. 1861	12 Oct. 1861	.....	Ditto	1	2	1	1	0	Ditto	...	...
61	Nuthoo	...	4	Hindoo	...	Child	...	1 year	Jeypoor	...	1 Nov. 1861	4 Nov. 1861	10 Nov. 1861	20 Nov. 1861	.....	Ditto	1	0	1	0	0	A brown phosphatic stone	...	...
62	Nngoo	...	25	Shaik	...	Labourer	...	2 years	Meerut	...	4 Nov. 1861	6 Nov. 1861	10 Nov. 1861	15 Nov. 1861	.....	Ditto	1	0	0	1	0	A small mulberry stone	...	...
63	Hookmee	...	12	Hindoo	...	Shoemaker	...	1 year	Ditto	...	10 Nov. 1861	19 Nov. 1861	1 Dec. 1861	2 Dec. 1861	.....	Ditto	1	0	1	2	0	A white phosphatic stone	...	...
64	Bndloo	...	4	Ditto	...	Child	...	1 year	Ditto	...	18 Nov. 1861	22 Nov. 1861	29 Nov. 1861	3 Dec. 1861	.....	Ditto	1	0	2	2	0	Ditto	...	...
65	Kichurma	...	6	Ditto	...	Boy	...	1 year	Ditto	...	23 Dec. 1861	.....	.....	3 March 1862	.....	Ditto	1	0	1	2	0			
66	Badam	...	4	Ditto	...	Ditto	...	1 year	Ditto	...	23 Dec. 1861	.....	.....	3 March 1862	.....	Ditto	...	...	...	...	...			
67	Kooray	...	15	Ditto	...	Ditto	...	3 years	Ditto	...	23 Jany. 1862	.....	.....	2 March 1862	.....	Ditto	...	...	...	...	...			
68	Poorun	...	30	Ditto	...	Banyan	...	2 years	Ditto	...	1 Dec. 1863	4 Dec. 1863	12 Dec. 1863	18 Dec. 1863	.....	Ditto	1	1	3	0	0			
69	Khadum	...	4	Mahomedan..	...	Child	...	8 mos.	Ditto	...	11 Dec. 1863	13 Dec. 1863	17 Dec. 1863	21 Dec. 1863	.....	Ditto	1	0	1	0	0			
70	Subham Baeg	...	3	Ditto	...	Ditto	...	6 mos.	Ditto	...	14 Dec. 1863	15 Dec. 1863	25 Dec. 1863	30 Dec. 1863	.....	Ditto	1	0	0	2	7			
71	Ashuk Ali	...	2½	Ditto	...	Ditto	...	7 mos.	Ditto	...	14 Dec. 1863	15 Dec. 1863	8 Jany. 1864	12 Jany. 1864	.....	Ditto	2	0	0	0	6			
72	Jumma	...	25	Hindoo	...	Shoemaker	...	2 years	Ditto	...	13 Dec. 1863	23 Dec. 1863	4 Jany. 1864	15 Jany. 1864	.....	Ditto	1	1	4	0	0			
73	Heerah	...	30	Ditto	...	Ditto	...	2 years	Ditto	...	18 Dec. 1863	31 Dec. 1863	2 Jany. 1864	8 Jany. 1864	.....	Ditto	1	0	0	2	15			
74	Rahim Baeg	...	13	Mahomedan..	...	Jat	...	2 years	Ditto	...	23 Dec. 1863	6 Jany. 1864	13 Jany. 1864	17 Jany. 1864	.....	Ditto	1	0	0	2	0			
75	Gungoo	...	7	Hindoo	...	Shoemaker	...	1 year	Ditto	...	4 Jany. 1864	12 Jany. 1864	16 Jany. 1864	25 Jany. 1864	.....	Ditto	1	0	1	1	9			
76	Kareem Bux	...	60	Mahomedan..	...	Cultivator	...	10 years	Ditto	...	3 Jany. 1864	.....	.....	4 Jany. 1864	.....	Ditto	1	2	0	0	4			
77	Mungoo	...	3	Hindoo	...	Child	...	8 mos.	Ditto	...	4 Jany. 1864	8 Jany. 1864	12 Jany. 1864	25 Jany. 1864	.....	Ditto	1	0	0	1	14			
78	Mahomed Bux	...	35	Mahomedan..	...	Shaik	...	1 year	Ditto	...	6 Jany. 1864	18 Jany. 1864	2 Feby. 1864	11 Feby. 1864	.....	Ditto	1	0	3	1	0			
79	Dhunima	...	40	Hindoo	...	Gardener	...	1 year	Ditto	...	8 Jany. 1864	19 Jany. 1864	29 Jany. 1864	6 Feby 1864	.....	Ditto	1	1	5	0	0			

CASE 76. It appears from the native doctor's account that, after I left the man, he did not rally, but sank into collapse, and so died. Did he not faint, ~~and~~ was no one near him? The operation was, in every respect, ordinary.

CASE 76. It appears from the native doctor's account that, after I left the man, he did not rally, but sank into collapse, and so died. Did he not faint, ~~was~~ was no one near him? The operation was, in every respect, ordinary.

DR. CUTCLIFFE'S PRACTICAL RULES FOR SAFE GUIDANCE IN THE LATERAL OPERATION OF LITHOTOMY.

ABSTRACT from the Records of cases of Stone operated on by H. C. Cutcliffe, F. R. C. S., Assistant Surgeon, H. M.'s Indian Army.—(Continued.)

No.	Names.	Ages.	Caste.	Occupation.	Duration of symptoms.	District.	DATES WHEN.					Manner of operation.	CALCULUS.					OBSERVATIONS.
							Admitted.	Urine first passed by Urethra.	Urine ceased to pass by wound.	Discharged cured.	Died.		Number.	WEIGHT.			Apparent character.	
														Ounces.	Drachms.	Scruples.			Grains.
80	Kadur Bux	40	Mahomedan..	Shaik	1 year	Meerut	13 Jan'y. 1864	26 Jan'y. 1864	2 Feby. 1864	10 Feby. 1864	.....	Lateral Operation— Lithotomy.	1	0	3	1	0	
81	Zaburiya	30	Hindoo	Sweeper	2 years	Ditto	13 Jan'y. 1864	29 Jan'y. 1864	12 Feby. 1864	28 Feby. 1864	.....	Ditto	1	0	3	0	0	
82	Jundhoo	6	Ditto	Boy	2 years	Ditto	16 Feby. 1864	3 Mar. 1864	9 Mar. 1864	19 March 1864	.....	Ditto	1	0	2	0	0	
83	Rasoolmaun	2½	Mahomedan..	Child	1 year	Ditto	26 Feby. 1864	28 Feby. 1864	2 Mar. 1864	8 Mar. 1864	.....	Ditto	1	0	1	2	0	
84	Jhangbier	45	Ditto	Tailer	2 years	Ditto	3 Mar. 1864	7 Mar. 1864	10 Mar. 1864	15 Mar. 1864	.....	Ditto	1	1	5	1	0	
85	Kulloo	5	Hindoo	Brahmin	2 years	Ditto	8 Mar. 1864	15 Mar. 1864	20 Mar. 1864	26 Mar. 1864	.....	Ditto	1	0	5	0	11	
86	Hameed Ullah	7	Mahomedan..	Shaik	8 mos.	Ditto	13 Mar. 1864	14 Mar. 1864	18 Mar. 1864	25 Mar. 1864	.....	Ditto	1	0	1	2	0	
87	Underza	8	Ditto	Gardener	3 years	Ditto	15 Mar. 1864	21 Mar. 1864	26 Mar. 1864	28 Mar. 1864	.....	Ditto	1	0	0	0	10	
88	Ganeeshih	6	Hindoo	Farmer	7 mos.	Tehree	9 April 1864	18 April 1864	25 April 1864	30 April 1864	.....	Ditto	1	0	1	1	16	
89	Kuntoo	18	Ditto	Ditto	3 years	Ditto	2 June 1864	13 June 1864	25 June 1864	7 July 1864	.....	Ditto	1	0	6	1	10	
90	Jaie Singh	13	Ditto	Ditto	2 years	Ditto	11 June 1864	22 June 1864	25 June 1864	29 June 1864	.....	Ditto	1	0	2	1	10	
91	Jhane	21	Ditto	Ditto	5 years	Lucknow	22 July 1864	9 Aug. 1864	18 Aug. 1864	19 Oct. 1864	.....	Ditto	1	3	1	1	10	
92	Belmoo	5	Ditto	Carpenter	2 years	Deyrah	1 Nov. 1864	10 Nov. 1864	16 Nov. 1864	20 Nov. 1864	.....	Ditto	1	0	3	1	10	
93	Dhurum Singh	40	Ditto	Shaik	2½ years	Ditto	10 Nov. 1864	.....	.....	.....	21 Nov. 1864	Ditto	1	1	1	0	0	
94	Nundhoo	58	Ditto	Farmer	9 years	Ditto	20 Nov. 1864	.....	.....	11 Dec. 1864	.....	Ditto	1	4	3	0	0	
95	Lieutenant Lamb...	65	European	Officer Invalid establishment.	many years	Ditto	—Nov. 1864	7th day	2 weeks.	2 months.	.....	Ditto	1	2	0	0	0	A large phosphatic stone ...
96	Juluma	30	Hindoo	Shoemaker	4 years	Ditto	9 Jan'y. 1865	16 Jan'y. 1865	20 Jan'y. 1865	27 Jan'y. 1865	.....	Ditto	1	0	4	0	15	
97	Naug Dutt	16	Ditto	Rajpoot	11 years	Ditto	2 Feby. 1865	12 Feby. 1865	22 Feby. 1865	22 Feby. 1865	.....	Ditto	1	2	3	0	12	
98	Gulab Singh	...	Ditto	Boy	5 years	Tehree	1 May 1865	5 May 1865	11 May 1865	17 May 1865	.....	Ditto	1	0	2	0	7	
99	Soomaroo	35	Ditto	Cultivator	10 years	Ditto	20 Oct. 1865	27 Oct. 1865	31 Oct. 1865	5 Nov. 1865	.....	Ditto	1	0	3	0	0	An ovoid Lithic acid stone
100	Asaroo	24	Ditto	Ditto	15 years	Ditto	20 Oct. 1865	31 Oct. 1865	4 Nov. 1865	9 Nov. 1865	.....	Ditto	1	1	4	2	7	Ditto
101	Gopalab	5	Ditto	Child	1½ years	Ditto	19 Nov. 1865	26 Nov. 1865	30 Nov. 1865	2 Dec. 1865	.....	Ditto	1	0	4	0	10	
102	Gulloo	4	Hindoo	Ditto	2 years	Ditto	19 Nov. 1865	25 Nov. 1865	29 Nov. 1865	2 Dec. 1865	.....	Ditto	1	0	6	1	6	
103	Kulmoo	28	Ditto	Cultivator	6 years	Ditto	10 Mar. 1866	25 Mar. 1866	1 April 1866	4 April 1866	.....	Ditto	1	0	3	1	18	
104	Chanzoo	13	Low-caste	Ditto	7 years	Ditto	1 May 1866	18 May 1866	25 May 1866	27 May 1866	.....	Ditto	1	1	2	1	4	
105	Saroop Singh	8	Rajpoot	Ditto	4 years	Ditto	3 May 1866	12 May 1866	19 May 1866	21 May 1866	.....	Ditto	1	1	1	2	6	A Lithic acid stone ...
106	Gungoo	6	Ditto	Ditto	4 years	Ditto	24 May 1866	6 June 1866	10 June 1866	12 June 1866	.....	Ditto	1	0	2	0	16	A mulberry stone ...

CASE 93. The operation was, in every respect, ordinary; and, had the man been properly attended to during my absence, he would not have died. Expired 21 November, while I was absent in the Jungles.

CASE 94. Discharged in a feeble state, with urine passing entirely by the urethra, but the perineal cicatrix incompletely closed.

CASE 95. An extremely emaciated, feeble, and worn out old soldier. Bed-sores after operation. Finally, good recovery.

ABSTRACT from the Records of cases of Stone operated on by H. C. Cutcliffe, F. R. C. S., Assistant Surgeon, H. M.'s Indian Army.—(Concluded.)

No.	Names.	Ages.	Caste.	Occupation.	Duration of symp- toms.	District.	DATES WHEN.				Manner of operation.	CALCULUS.					OBSERVATIONS.		
							Admitted.	Urine first passed by Urethra.	Urine ceased to pass by wound.	Discharged cured.		Died.	Number.	WEIGHT.					
														Ounces.	Draohms.	Scruples.		Grains.	
107	Lucheroo	...	11	Rajpoot.	...	Tehree	9 June 1866	17 June 1866	21 June 1866	21 June 1866	.....	Lateral Operation— Lithotomy.	1	0	3	0	0	A Phosphatic stone ...	...
108	Marah	...	45	Ditto	...	Ditto	9 June 1866	17 June 1866	21 June 1866	24 June 1866	.....	Ditto	1	0	1	1	6	Ditto ...	...
109	Khalaroo	...	11	Ditto	...	Ditto	5 Sept. 1866	15 Sept. 1866	20 Sept. 1866	25 Sept. 1866	.....	Ditto	1	0	2	0	0	Ditto ...	...
110	Jaewa	...	31	Ditto	...	Ditto	10 Sept. 1866	20 Sept. 1866	23 Sept. 1866	26 Sept. 1866	.....	Ditto	1	0	2	0	5	Ditto ...	...
111	Kasoba	..	10	Ditto	...	Ditto	23 Oct. 1866	6 Nov. 1866	8 Nov. 1866	14 Nov. 1866	.....	Ditto	2	1	2	1	10	Ditto ...	...

